

Appl. No. 09/842,139

Reply to Office Action of April 7, 2003

REMARKS

Claims 1-4 and 17 are active in the present application. Claims 5-16 and 18-25 have been canceled. Claim 17 has been amended for clarity. No new matter is added.

REQUEST FOR RECONSIDERATION

Applicants thank Examiner Le and the Examiner's Supervisor Mr. Brian Miller for the helpful and courteous discussion of June 4, 2003. During the discussion, Applicants' U.S. representative presented arguments that the claimed optical recording medium of Claim 1 is distinct from the prior art recording media described in the references relied upon by the Examiner as evidenced by the requirement that a cation resin is present in the claimed resin.

Present independent Claim 1 requires the presence of a cation resin in the claimed optical recording medium. The cation resin is present in a print-receiving layer which is the outermost layer on a side opposite to a light incidence side. The cation resins of the present invention are described in the specification on page 13, lines 10-25. The cation resin is "one having a cationic moiety in its molecule . . ." (page 13, lines 10-11). The Office is asserting that the optical recording medium of present independent Claim 1 is anticipated by the disclosure of the Komaki reference wherein a resin containing a photo-cation polymerization catalyst is present. Applicants submit that no where in the Komaki reference is the presently recited cation resin disclosed.

The Office cited to column 10, lines 20-23, as evidence that Komaki discloses the presently claimed cation resins. However, the disclosure of Komaki describes a composition which contains a photo-cation polymerization catalyst and a resin, but not a cation resin. The prior art photo-cation polymerization catalyst is described in column 9, line 49 through column 10, line 13 of the Komaki patent. The prior art photo-cation polymerization catalyst can be a material such as a metal fluoroboric acid salt of various organic-type ligands. The prior art photo-cation polymerization catalyst is nowhere described as a resin, nor is there any indication that the photo-cation polymerization catalyst is polymeric or resinous in nature.

Although the Komaki reference may disclose resins such as poly(vinylpyrrolidone), nowhere is it disclosed that such materials must contain a cationic moiety.

During the discussion of June 4, 2003, the Examiner pointed to disclosure at column 9, lines 32-35 as evidence that the prior art composition contains both a photo-cation polymerization catalyst and an epoxy resin. A mixture of a photo-cation polymerization catalyst and an epoxy resin is not the presently claimed cation resin. Generic epoxy resins are not cationic in nature. A description of epoxy resins from "Kirk Othmer Encyclopedia of Chemistry," 4th ed., John Wiley & Sons, (1994), vol. 9, pp. 730-737, is attached herewith for the Examiner's convenience. As is evident from this description, epoxy resins do not have cation moieties (see for example formula (1) on page 732).

Therefore, the Komaki reference does not disclose the present cation resin and cannot disclose or suggest an optical recording medium wherein a print receiving layer comprises a cation resin. Applicants respectfully traverse the Office's assertion that the Komaki reference discloses an optical recording medium where the print receiving layer comprises a cation resin and request the withdrawal of the rejection under 35 U.S.C. § 102(e).

The Office rejected Claim 17 as obvious in view of Komaki in combination with one or more other prior art references. It is the Office's assertion that Claim 17 is obvious since Komaki teaches an optical recording medium containing fine particles. As a basis for the rejection the Office appears to take the position that the claimed range of 30 to 50% of fine particles in the present claims is rendered obvious by the disclosure in Komaki that the prior art optical recording medium can contain from 1 to 20% of inorganic filler. The Office cites to In re Woodruff 16 USPQ2d 1934 (CAFC 1990) as legal precedent for the rejection. It should be noted, however, that in Woodruff the ranges of the challenged claims overlapped the ranges disclosed in the prior art. This differs from the present situation since the

presently claimed ranges do not overlap or touch the ranges of inorganic filler disclosed in the Komaki patent.

In column 2, lines 19-35 of Komaki it is disclosed:

That is, the present invention is a composition for coating which comprises a radiation-curable compound (A) containing a monofunctional (meth)acrylic monomer and multifunctional more than bifunctional (meth)acrylic monomer, a water-absorbing organic filler (C) and a water-absorbing inorganic filler (D).

It is further stated at column 2, lines 31-35:

In the composition of the present invention, the composition preferably contains 10-60 wt% of the water-absorbing organic filler (C) and 1-20% by weight of the water-absorbing inorganic filler (D) relative to the radiation-curable compound (A).

Therefore, the water-absorbing inorganic filler (D) may be present in the prior art composition in an amount of from 1-20% by weight relative to the radiation-curable compound (A). In the presently claimed invention, the inorganic substance is present in an amount of from 30-50% in the composition. If other materials are present in the claimed composition, the amount (wt.%) of inorganic substance relative to any resin would be even greater than 30-50% since the basis for determining percent by weight would necessarily be smaller.

Although Komaki discloses that a water-absorbing inorganic filler (D) may be present in the prior art composition, the patent is silent with regard to the inclusion of the inorganic filler in amounts of greater than 20%. In fact, the patent even teaches that an amount of inorganic filler greater than 20% is detrimental to the properties of the resulting resin. See, for example, column 4, lines 41-50 where it is disclosed:

In addition, when the amount of the inorganic filler (D) is less than 1% by weight, coating property tends to be deteriorated and, on the other hand, *when the amount of the inorganic filler (D) exceeds 20% by weight, coating property becomes to be deteriorated* because of remarkable increase in viscosity. More preferable amount of the filler is 20-50% by weight of the water-absorbing organic filler (C) and 3-15% by weight of the water-

absorbing inorganic filler (D) relative to the radiation-curable compound
(A). (*italics added*).

Not only does the reference not disclose compositions which contain more than 20% by weight of inorganic filler, the reference teaches that compositions containing more than 20% by weight of the inorganic filler are not desirable. Applicants submit that present Claim 17 is not obvious in view of the prior art relied upon by the Examiner since the prior art references (1) do not disclose compositions having more than 20% of an inorganic fine substance, and (2) teach away from compositions which contain amounts of inorganic filler greater than 20%.

Applicants respectfully request the withdrawal of the rejection of Claim 17.

Appl. No. 09/842,139
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Applicants submit the amendment to the claims places all now-pending claims in condition for allowance. Applicants respectfully request the withdrawal of the rejections and the passage of all now pending claims to Issue.

Respectfully submitted,

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